

THE PHILOSOPHY AND PRACTICALITY OF A YEAR ROUND TRAINING PROGRAM

By.
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THE DISTANCE DICHOTOMY

SPEED – OR – STRENGTH
ANEAROBIC – OR – AEROBIC
INTERVALS – OR – STEADY STATE
BIOMECHANICS – OR – PHYSIOLOGY

PHILOSOPHY

- School Mission Statement: “To assist parents in forming disciples of Christ who enrich the culture and stewards of Gods gifts.”
- At Carroll we try to structure our program in a way that helps athletes to get the most out of the talents and gifts they have been given.
- This means individualized as well as team training programs and goals.

Lydiard

Gerschler

Vs.

Cerruty

Zatopek

PHILOSOPHY cont.

- Inevitably the quest to develop training programs that work best for the individuals on our team leads to some difficult philosophical questions.
- When exploring distance training philosophies a dichotomy seems to exist.

JIM HUNT

“Many Training Programs are evaluated by how much mileage is run each week and focus solely on developing cardiovascular power. Any neuromuscular power that develops happens without help from functional muscle strengthening activities. The problem with this traditional training scheme is that it does not develop the complete runner.”

Hunt, Jim. "We Can Raise American Distance Runners To Gold Medal Levels." *Track Coach: Formerly Track Technique* Iss. 196 Summer 2011: 6239-247. Print.

ROBERT CHAPMAN

However, advances in measurement techniques, including muscle biopsies and nuclear magnetic imaging have produced different results for the aerobic / anaerobic contributions to exercise than the classic values. These new studies, completed in the last ten years, have produced the new table below:

	Anaerobic %	Aerobic %
Mar	1	99
10k	3	97
5k	6	94
3k	12	88
1500m	23	77
800m	40	60
400m	57	43

These new values indicate that most events, including the mile, are ~~not~~ much more aerobic based than was previously thought. This finding also matches the applied results that many coaches of elite level milers have also noticed."

Chapman, Robert. "Training for the Mile/1600: Featuring an Aerobic/Strength Approach." *Scribd*. 08 Jan. 2010. Web. 09 Sept. 2009. <<http://www.scribd.com/doc/24926841/Training-for-the-1600>>.

A GOOD PHILOSOPHY

- Recognizes that it is not a dichotomy but a continuum or spectrum.

- Time must be spent on all levels of the spectrum but with differing degrees of emphasis and amount according to the goals of a particular phase of training.
- Good philosophies get the timing of the spectrum down so that their athletes achieve the most when it counts the most.

CAN'T THERE JUST BE A THEORY OF EVERYTHING (TOE), LIKE IN PHYSICS?

A GOOD START

Benson, Tony, and Irv Ray. *Run with the Best: a Coach's Guide to Training Middle and Long Distance Runners*. Second ed. Mountain View, CA: Tafnews, 2001. Print.

<http://www.youtube.com/watch?v=bLg4i4gMzqA>

Planning and Goal Setting Sheet

Name: John Doe		Age: 16		Training Age: 7		Year: 2011-12	
Estimated Lifetime Accumulated Mileage: 9265		Planned Mileage for Current Year: 2600		Average Mileage per Week: 52			
PR ¹							
400m: 51.5		800m: 1:57		1600m: 4:25		3200m: 9:50	
				Goals		5000m: 16:25	
400m: 50		800m: 1:54		1600m: 4:17		3200m: 9:20	
						5000m: 15:50	
Year:	Annual Total:	Annual Increase:	Cumulative Total:	Year:	Annual Total:	Annual Increase:	Cumulative Total:
Pre-09	NA	NA	6000	2011-12	2600	400	12300
2009-10	1500	NA	7500	2012-13	2900	300	15200
2010-11	2200	700	9700				
Base # of Weeks: 30							
Phase I: Weeks: 10		Phase II: Weeks: 10		Phase III: Weeks: 10		Pre-Comp # of Weeks: 10	
(%) of Volume: 33		(%) of Volume: 33		(%) of Volume: 33		(%) of Volume: 10	
Wk	Miles	Long Run	Miles	Miles	Long Run	Miles	Long Run
01	10	5	15	10	5	15	10
02	10	7	17	10	7	17	10
03	10	9	19	10	9	19	10
04	10	11	21	10	11	21	10
05	10	13	23	10	13	23	10
06	10	15	25	10	15	25	10
07	10	17	27	10	17	27	10
08	10	19	29	10	19	29	10
09	10	21	31	10	21	31	10
10	10	23	33	10	23	33	10
11	10	25	35	10	25	35	10
12	10	27	37	10	27	37	10
13	10	29	39	10	29	39	10
14	10	31	41	10	31	41	10
15	10	33	43	10	33	43	10
16	10	35	45	10	35	45	10
17	10	37	47	10	37	47	10
18	10	39	49	10	39	49	10
19	10	41	51	10	41	51	10
20	10	43	53	10	43	53	10
21	10	45	55	10	45	55	10
22	10	47	57	10	47	57	10
23	10	49	59	10	49	59	10
24	10	51	61	10	51	61	10
25	10	53	63	10	53	63	10
26	10	55	65	10	55	65	10
27	10	57	67	10	57	67	10
28	10	59	69	10	59	69	10
29	10	61	71	10	61	71	10
30	10	63	73	10	63	73	10
31	10	65	75	10	65	75	10
32	10	67	77	10	67	77	10
33	10	69	79	10	69	79	10
34	10	71	81	10	71	81	10
35	10	73	83	10	73	83	10
36	10	75	85	10	75	85	10
37	10	77	87	10	77	87	10
38	10	79	89	10	79	89	10
39	10	81	91	10	81	91	10
40	10	83	93	10	83	93	10
41	10	85	95	10	85	95	10
42	10	87	97	10	87	97	10
43	10	89	99	10	89	99	10
44	10	91	101	10	91	101	10
45	10	93	103	10	93	103	10
46	10	95	105	10	95	105	10
47	10	97	107	10	97	107	10
48	10	99	109	10	99	109	10
49	10	101	111	10	101	111	10
50	10	103	113	10	103	113	10
51	10	105	115	10	105	115	10
52	10	107	117	10	107	117	10
53	10	109	119	10	109	119	10
54	10	111	121	10	111	121	10
55	10	113	123	10	113	123	10
56	10	115	125	10	115	125	10
57	10	117	127	10	117	127	10
58	10	119	129	10	119	129	10
59	10	121	131	10	121	131	10
60	10	123	133	10	123	133	10
61	10	125	135	10	125	135	10
62	10	127	137	10	127	137	10
63	10	129	139	10	129	139	10
64	10	131	141	10	131	141	10
65	10	133	143	10	133	143	10
66	10	135	145	10	135	145	10
67	10	137	147	10	137	147	10
68	10	139	149	10	139	149	10
69	10	141	151	10	141	151	10
70	10	143	153	10	143	153	10
71	10	145	155	10	145	155	10
72	10	147	157	10	147	157	10
73	10	149	159	10	149	159	10
74	10	151	161	10	151	161	10
75	10	153	163	10	153	163	10
76	10	155	165	10	155	165	10
77	10	157	167	10	157	167	10
78	10	159	169	10	159	169	10
79	10	161	171	10	161	171	10
80	10	163	173	10	163	173	10
81	10	165	175	10	165	175	10
82	10	167	177	10	167	177	10
83	10	169	179	10	169	179	10
84	10	171	181	10	171	181	10
85	10	173	183	10	173	183	10
86	10	175	185	10	175	185	10
87	10	177	187	10	177	187	10
88	10	179	189	10	179	189	10
89	10	181	191	10	181	191	10
90	10	183	193	10	183	193	10
91	10	185	195	10	185	195	10
92	10	187	197	10	187	197	10
93	10	189	199	10	189	199	10
94	10	191	201	10	191	201	10
95	10	193	203	10	193	203	10
96	10	195	205	10	195	205	10
97	10	197	207	10	197	207	10
98	10	199	209	10	199	209	10
99	10	201	211	10	201	211	10
100	10	203	213	10	203	213	10
101	10	205	215	10	205	215	10
102	10	207	217	10	207	217	10
103	10	209	219	10	209	219	10
104	10	211	221	10	211	221	10
105	10	213	223	10	213	223	10
106	10	215	225	10	215	225	10
107	10	217	227	10	217	227	10
108	10	219	229	10	219	229	10
109	10	221	231	10	221	231	10
110	10	223	233	10	223	233	10
111	10	225	235	10	225	235	10
112	10	227	237	10	227	237	10
113	10	229	239	10	229	239	10
114	10	231	241	10	231	241	10
115	10	233	243	10	233	243	10
116	10	235	245	10	235	245	10
117	10	237	247	10	237	247	10
118	10	239	249	10	239	249	10
119	10	241	251	10	241	251	10
120	10	243	253	10	243	253	10
121	10	245	255	10	245	255	10
122	10	247	257	10	247	257	10
123	10	249	259	10	249	259	10
124	10	251	261	10	251	261	10
125	10	253	263	10	253	263	10
126	10	255	265	10	255	265	10
127	10	257	267	10	257	267	10
128	10	259	269	10	259	269	10
129	10	261	271	10	261	271	10
130	10	263	273	10	263	273	10
131	10	265	275	10	265	275	10
132	10	267	277	10	267	277	10
133	10	269	279	10	269	279	10
134	10	271	281	10	271	281	10
135	10	273	283	10	273	283	10
136	10	275	285	10	275	285	10
137	10	277	287	10	277	287	10
138	10	279	289	10	279	289	10
139	10	281	291	10	281	291	10
140	10	283	293	10	283	293	10
141	10	285	295	10	285	295	10
142	10	287	297	10	287	297	10
143	10	289	299	10	289	299	10
144	10	291	301	10	291	301	10
145	10	293	303	10	293	303	10
146	10	295	305	10	295	305	10
147	10	297	307	10	297	307	10
148	10	299	309	10	299	309	10
149	10	301	311	10	301	311	10
150	10	303	313	10	303	313	10
151	10	305	315	10	305	315	10
152	10	307	317	10	307	317	10
153	10						

BASE PHASE

- Should = 60-65% Of Yearly volume
- Broken into 3 phases of 10 weeks each.
 - Summer training 1st phase 18-20%
 - Cross Country 2nd phase 20-22%
 - Winter Training 3rd phase 22-24%

Goals of Base Phase III (Winter)

1. Build Aerobic Strength(AC-M-LT-Ti)
2. Build Mileage Toward Highest Level(LR of 25%)
3. Improve Speed Over 400m (100/300jog @ 400m GP)
4. Build Overall Body Strength(lift for strength)
5. Maintain Stride Economy (drills, hill runs, and repeats with extra recovery)

Goals of Base Phase I (Summer)

1. Build Aerobic Strength(AC-M-LT runs)
2. Build Mileage (LR to 25%)
3. Improve Speed Over 400m (100/300jog @ building toward 400mGP)
4. Build Overall Body Strength(lift for strength)
5. Improve Stride Economy (drills, hill runs, and repeats with extra recovery)

PRE-COMPETITION PHASE

- Should = 20-25% Of Yearly volume
- Broken Into 2 Phases of 5 Weeks each.
 - Mid Jan-Late Feb 1st phase 10-13%
 - Late Feb-Mid Mar 2nd phase 10-12%
- Time to Get More Event Specific with Older Athletes.

Goals of Base Phase II (XC SEASON)

1. Run PR at 5k Distance on a Familiar Course.
2. Improve Placing, Over Previous Year, in Championship Meets.
3. Sharpen Aerobic Strength (LR 22-23%, Ti, LT,)
4. Begin 5k Pace Work With DP Intervals and Move to GP Intervals
5. Sharpen Stride Economy With Drills and Repeats @ 800m and 1600m DP (mix them in w/ DP intervals)
6. Sharpen 400m Speed (Move 100/300j to hills)
7. Build Functional Strength and Strength Endurance (functional circuit)

Goals of Pre-Comp Phase I

1. Sharpen Aerobic Strength(LR of 25%)
2. Sharpen Aerobic Fitness (Ti, LT)
3. Improve Speed Over 400m (move 100/300 jog to hills @ 400m GP, race 400m and 200m @ indoor meets)
4. Build Overall Body Strength (lift for strength)
5. Develop VO2Max (Daniels I training, and repeats @ 3200m DP with decreasing rest)
6. Begin Anaerobic Strength (repeats @ 800m DP with medium recovery, increasing distance 200s, 300s, 350s)

Goals of Pre-Comp Phase II

1. Maintain Aerobic Fitness (LR 23%, Ti, LT)
2. Sharpen Speed Over 400m (20m sprints, 100/300 jog begin speed endurance.)
3. Build Functional Strength (functional circuit)
4. Build VO2Max (Daniels I Training, race 3000m indoor)
5. Build Anaerobic Strength (Repeats @ 800m DP with medium recovery, increasing distance 300s, 350s, 400s)

Goals of Competition Phase II

1. Establish New PRs at 3200m, 1600m, and 800m
2. Sharpen Anaerobic Strength (Repeats @ 800m GP with minimal recovery, 300s, 200s, decreased volume)
3. Sharpen Lactic Tolerance (50 sprint/50 float, 200s w/diagonal jog, decreased volume)
4. Sharpen VO2Max (Daniels I training, and repeats @ 3200m GP with minimal recovery, decreased volume)
5. Develop Explosive Strength (light weights, control down explode up/ superset with plyo exercises)
6. Maintain Speed Over 400m (100/300jog, lessen volume of speed endurance.)
7. Maintain Aerobic Fitness (LR 20%, Ti)

COMPETITION PHASE

- Should = 15-20% Of Yearly volume
- Broken Into 2 Phases of 5 Weeks each.
 - Mid March-Late April 1st phase 10-13%
 - Late April-State Meet 2nd phase 10-12%
- Intensity Peaks and Recovery is Enough to Allow Focus on the Championship Races. Volume drops to lowest point.

EXAMPLE WEEKLY WORKOUTS

- What Follows are example weeks for a Senior Athlete who is going to average 60 miles per week.
- The mileage is based on the time it would take to complete and is based on an athlete with a VO2Max of sub-10:00.
- For the Pre-Competition and Competition Phases I chose to discuss an athlete who would be training for the 3200m and 4x800m (A combination the we try to cultivate at Bishop Carroll) since there is another clinic session on 800m/1600m training.

Goals of Competition Phase I

1. Develop Race Tactic and Familiarity (race 400 – 3200)
2. Sharpen VO2Max (Daniels I Training, and Repeats @ 3200m GP with decreasing rest)
3. Sharpen Anaerobic Strength (Repeats @ 800m GP with decreasing recovery, 300s, 350s, 400s)
4. Sharpen Speed Over 400m (30m sprints, 100/300jog intensify speed endurance.)
5. Develop Lactic Tolerance (60sprint/40float)
6. Build Strength Endurance (light weight circuits w/high reps)
7. Maintain Aerobic Fitness (LR 20%, Ti, LT)

Example Week Mid-Base Phase I

After 3-4 week build up of AR and AC running only.

Mon: AM: AR=3 + 3(3x40m w/2:00r; 5:00/ sets)
 PM: AC=6
 Tue: AM: AC=3
 PM: AC=6 + ST x 4
 Wed: AM: Drills + Plyos + SP=100/300j x 6, AR=3
 PM: AC=6
 Thu: AM: AR=3
 PM: AC=6 + FR x 4
 Fri: AM: AR=3
 PM: AC=6 + ST x 4
 Sat: LR= 10 Miles
 Sun: OFF

Example Week Late-Base Phase I

* Lower VO2Max Training Paces by 5 seconds

Mon: AC=9

Tue: AM: AR=1+6x1:00↑Hill w/3:00j+8x:30↑Hill w/2:00j+AR=1

PM: AC=8 + ST x 4

Wed: AM: AC=3 + STx4

PM: LT=3k + AR=2k +M=8K

Thu: AC=9 + ST x 4

Fri: AM: AR=1+4x:30↑Hill w/2:00j+8x1:00↑Hill w/3:00j+AR=1

PM: AC=6

Sat: LR= 16 Miles

Sun: OFF

Example Week Mid-Base Phase III

*Lower Vo2Max Training Pace by 5 Seconds.

-This week would come after 3-4 week build up of AR and AC running only.

Mon: AC=9(6K@ M) + ST x 4

Tue: AM: AR=3

PM: Drills + Plyos + SP=100/300j x 6, AR=6

Wed: AC=9(3k@ M) + FR x 4

Thu: AM: AR=4

PM: AC=6 + ST x 4

Fri: AC=8 + FR x 4

Sat: LR= 15 + ST x 4

Sun: OFF

Example Week Early-Base Phase II

Mon: LR= 17 + ST x 6

Tue: AM: Drills + SP=3x20m Sprints + 100/300j x 10, AC=4

PM: AR=1 + 8x1K @ 5K DP w/ 3:00r + AR=3

Wed: AM: AC=3 + FR x 4

PM: AR=1 +1x5K @Ti w/3:00r +1x3K @Ti w/2:00r +AC=6

Thu: AM: AC=3

PM: AC=9 + FR x 4

Fri: AR=3 + ST x 3

Sat: Race TM=9

Sun: OFF

Example Week Late-Base Phase III

Mon: AC=11(9K@ M) + ST x 4

Tue: AM: AR=5

PM: Drills + Plyos + SP=100/300j x 10, AR=6

Wed: AC=10(8k@ LT) + FR x 4

Thu: AM: AR=4

PM: AC=6 + ST x 4

Fri: AC=9(6k@ M) + FR x 4

Sat: LR= 17 + ST x 4

Sun: OFF

Example Week Late-Base Phase II

Mon: LR= 11 + ST x 6

Tue: AR= 1+4x(1000m @Ti w/1:00+800m @5k w/:30j + 200m @800m) 3:00r/set

+ AR=3

Wed: AM: AR=4 + ST x 4

PM: AC=6

Thu: AM: AC=3

PM: Drills + Sp^{4x100/300j}, AC=7

Fri: AR=3 + ST x 3

Sat: Race TM=8

Sun: OFF

Example Week Pre-Comp Phase I

Lower Vo2Max Training Pace by 5 Seconds

Mon: AC=11(9K@ M) + ST x 4

Tue: R=6x200m @ 800m DP w/ 4:00j, AR=4

Wed: AC=11(6k@ Ti) + FR x 4

Thu: AM: AR=4

PM: AC=6 + ST x 4

Fri: VO₂Max 5x300h/2:00e+AR=2

Sat: LR= 16 + ST x 4

Sun: OFF

Example Week Pre-Comp Phase II

*Lower Vo2Max Training Pace by 5 Seconds
 Mon: 3 miles @ 10K On Track + AC=7
 Tue: Drills + Plyos + SP=3x20m Sprints + 100/300j x 10, AC=4
 Wed: AC=10 + FR x 4
 Thu: AM: 6K@Ti + AR=2
 PM: R=12x200m/daj @ 800m DP + AR=2
 Fri: AC=10 + FR x 4
 Sat: LR= 14 + ST x 4
 Sun: OFF

Example Week Comp Phase II (Peak)

Mon: LR= 8 + ST x 4
 Tue: 2x800m BD³⁰⁰⁻³⁰⁰⁻²⁰⁰, 1@1600mGP-1&1@800mGP-1 + AR=5
 Wed: Drills + SP^{3x40m/2:00}&100/300jx4, AC=7
 Thu: PM: Pre-Meet AR=3
 Fri: Race
 Sat: Race or Rest
 Sun: OFF

Example Week Comp Phase I

Mon: 3x1000m@3200m GP 1x1200m BD@1600m DP 500-400-300 + AR=6
 Tue: Drills + SE/SP 3x150m(@FULLSPEED w/FULLREC) + 100/ 300j x 10,
 AR=6
 Wed: AM: 6K@Ti + AR=2
 PM: R=8x300m @ 1600m DP + AR=3
 Thu: AM: AR=4 + FR x 4
 PM: Pre-Meet AR=3
 Fri: RACE
 Sat: LR= 13 + ST x 4
 Sun: OFF

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Example Week Comp Phase II

Mon: 3x1000m BD@1600mGP 500-300-200 +AR=6
 Tue: Drills + SE/SP2x200m(@FULLSPEEDw/FULLREC) + 100/ 300j x 8,
 AC=8
 Wed: 4x400m^(2@3200mGP,2@3200mGP-1) + 6x200m^(3@800DP,3@DP-1)
 + AR=6
 Thu: AM: AR=3 + FR x 4
 PM: Pre-Meet AR=3
 Fri: Race
 Sat: LR= 10 + ST x 4
 Sun: OFF